

Chapter 1: Setting the Stage

This "Chapter 1" is original to Massachusetts Health Care Trends: 1990-1999.

Health care, together with education and computer technology, is what Massachusetts is known for throughout the world. We import students and patients and export college graduates, new doctors and healthier people. Health care is labor intensive and therefore, expensive. But, it provides jobs which are, in

general, well-paying and accompanied by benefits, including health insurance. We capture a large portion of federal research dollars which are similarly beneficial to our economy and with them we invent technologies, pharmaceuticals, and processes that we export internationally. It's an important business to those who make a living within it, to those who live here and benefit first by its discoveries and to the rest of the world to whom its benefits soon accrue.

We are a small state, better educated than most, older, and more likely to be employed with higher per capita income than the rest of the nation. Massachusetts also has a higher proportion of Caucasians than the United States as a whole, but we are changing and benefiting from other racial and ethnic groups who invigorate the labor pool, challenge some of our ideas, and hopefully will further our tradition of excellence in health care.

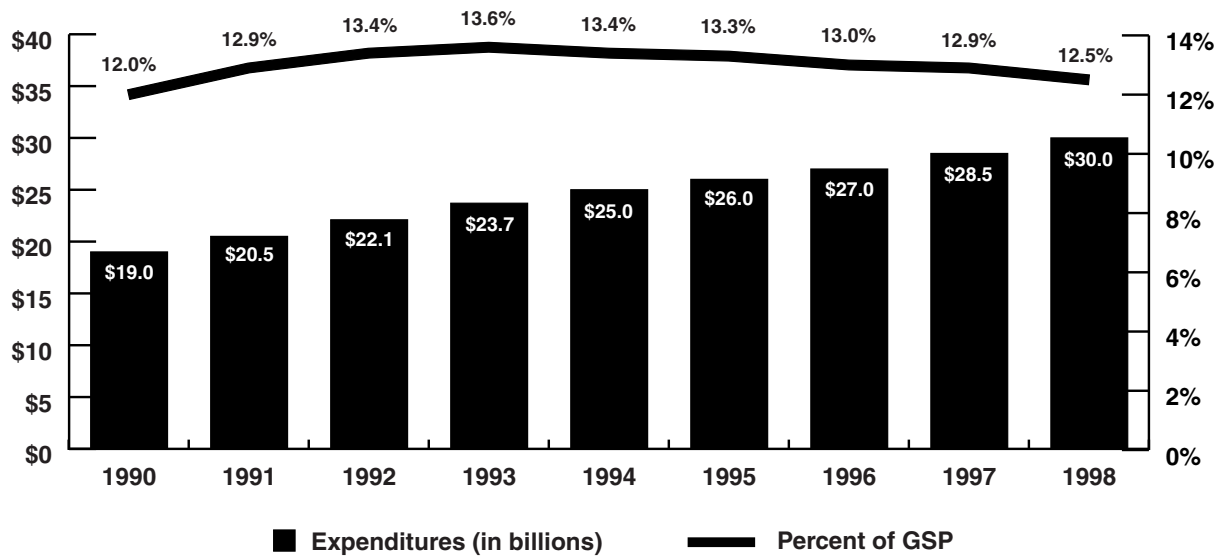
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Massachusetts Health Care Expenditures and Percent of Gross State Product (1990-1998)



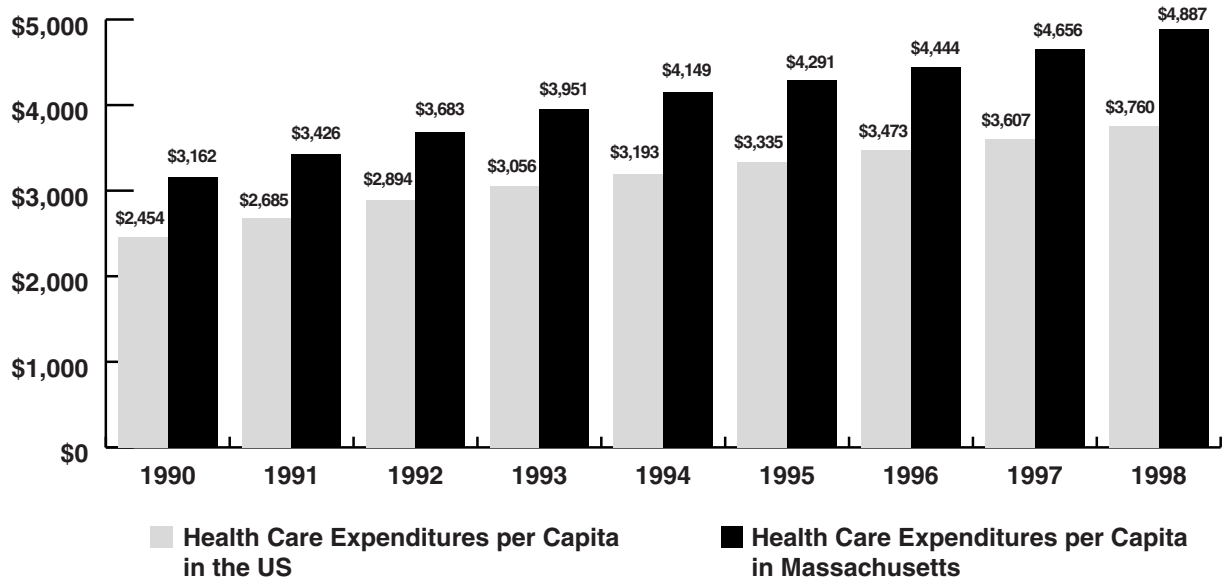
Sources: "Massachusetts Health Expenditures, 1980-98," Health Care Financing Administration, Office of the Actuary, National Health Statistics Group, July 17, 2000; "Regional Accounts Data, Gross State Product," US Department of Commerce, Bureau of Economic Analysis, www.bea.doc.gov

Notes: These numbers have not been adjusted for inflation. CMS only updates state-level information every five years.

Figure 1.1

- Estimated health care expenditures¹ in Massachusetts increased by 58% from 1990 to 1998. The average annual change was 6% between 1990 and 1998. The share of Gross State Product (GSP) accounted for by health expenditures peaked in 1993.

Health Care Expenditures per Capita in the US and Massachusetts (1990-1998)



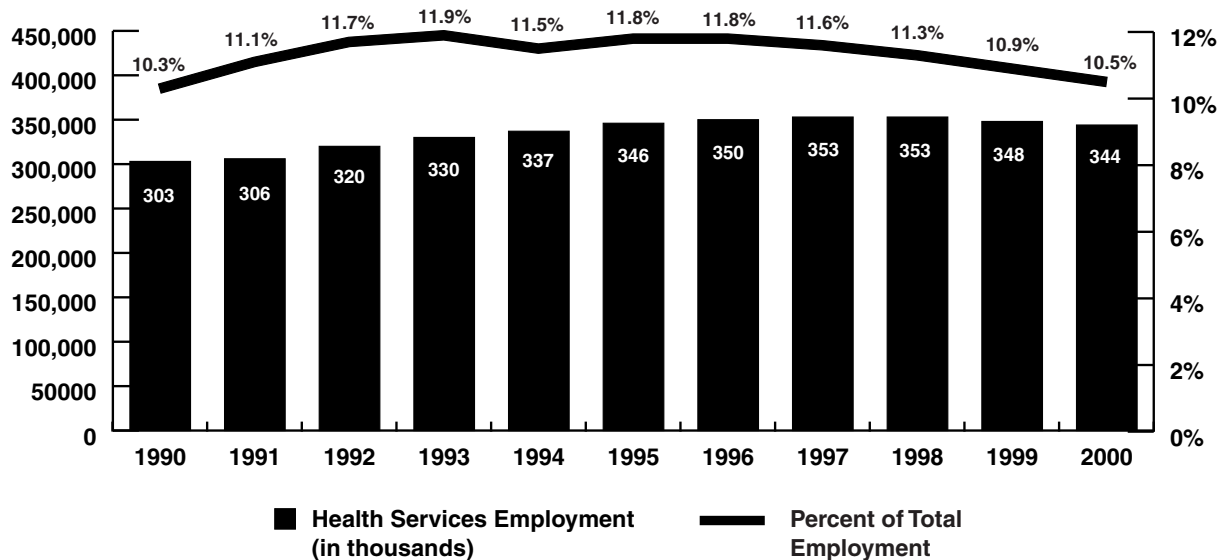
Source: "Massachusetts Health Expenditures, 1989-98," Health Care Financing Administration, Office of the Actuary, National Health Statistics Group, July 17, 2000

Notes: These numbers have not been adjusted for inflation. CMS only updates state-level information every five years.

Figure 1.2

- Per capita health expenditures in Massachusetts were 30% higher than the national average in 1998. The rate of increase in per capita health expenditures in Massachusetts was close to the US rate from 1990 to 1998—55% versus 53%. The relative difference in this per capita expenditure measure between Massachusetts and the nation was stable over this period.

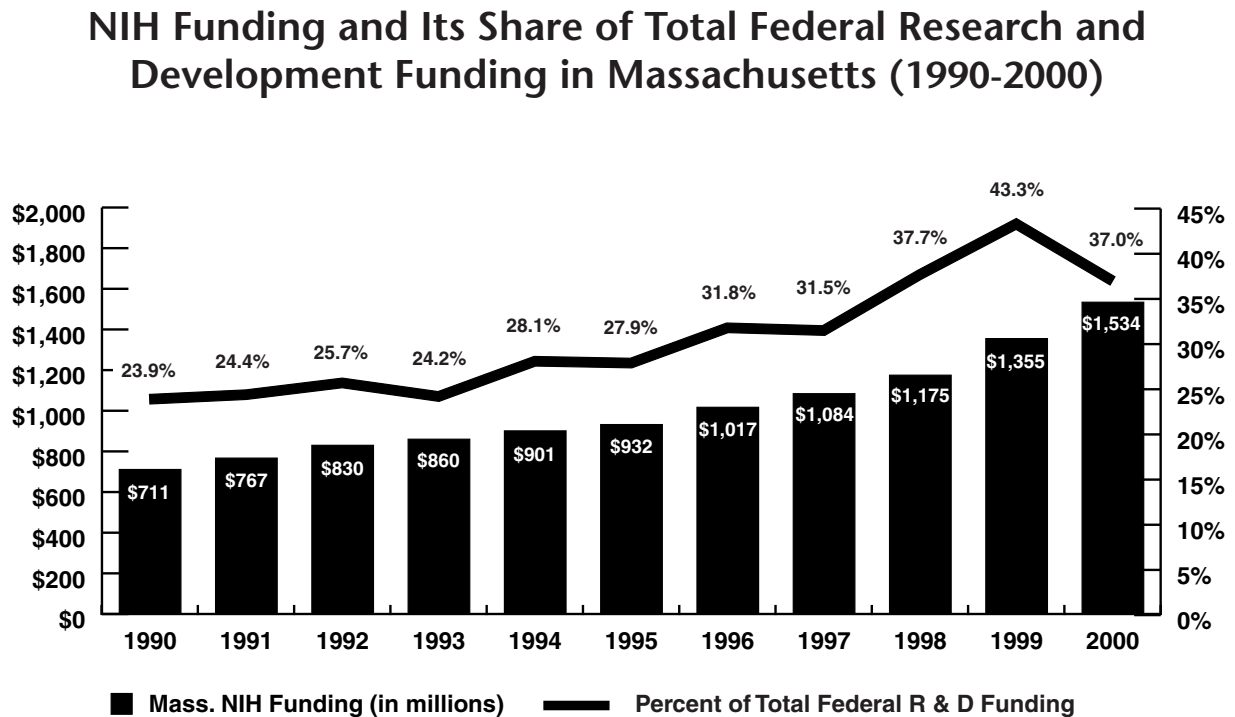
Health Services Employment and Percent of Total Employment in Massachusetts (1990-2000)



Source: Massachusetts Division of Employment and Training, www.detma.org

Figure 1.3

- Employment in the Massachusetts health services sector² steadily increased over the last decade from 302,679 employees in 1990 to 344,366 in 2000, an increase of 13.8%. The share of health care workers compared to total employees in the state was highest in 1993, the year that health expenditures as a share of GSP peaked (see Figure 1.1 on page 6).

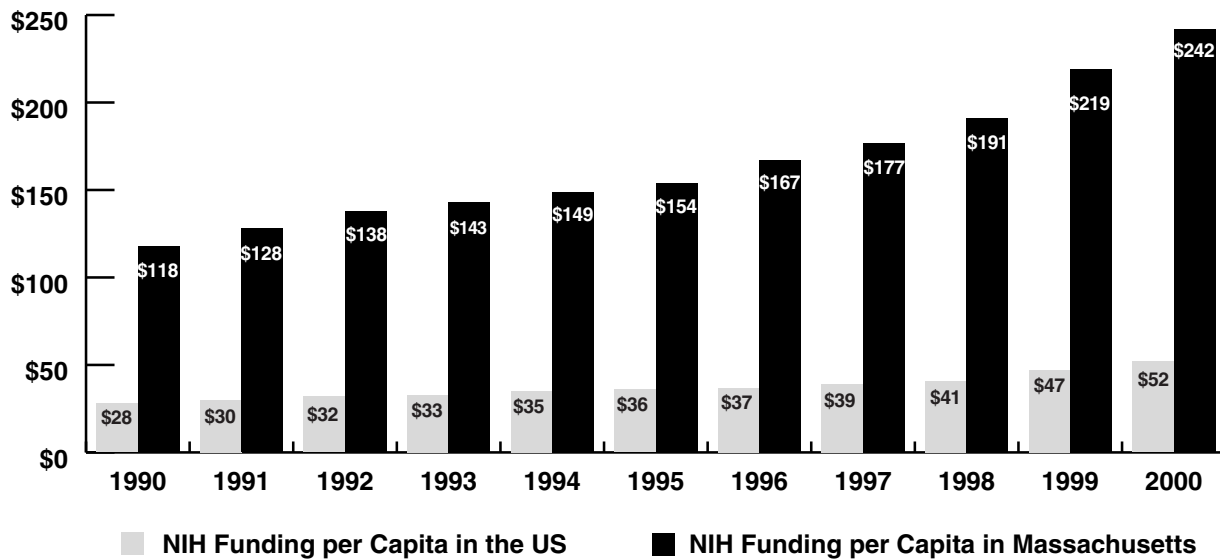


Sources: National Institute of Health and National Science Foundation; 1990-1993 NIH funding data are estimated based on "NIH Support to the Top 100 Cities."
 Note: These numbers have not been adjusted for inflation.

Figure 1.4

- Massachusetts received \$1.5 billion in medical research funding from the National Institutes of Health (NIH) in 2000, up 116% from \$711 million in 1990. Of all the research and development funding received in Massachusetts from the federal government in 2000, NIH funding accounted for 37%, a substantial increase from 24% in 1990, but a drop from 1999. NIH-funded research for universities and teaching hospitals provides important financial support for the health services, biotechnology, medical devices industries, and education in Massachusetts.

NIH Funding per Capita in the US and Massachusetts (1990-2000)

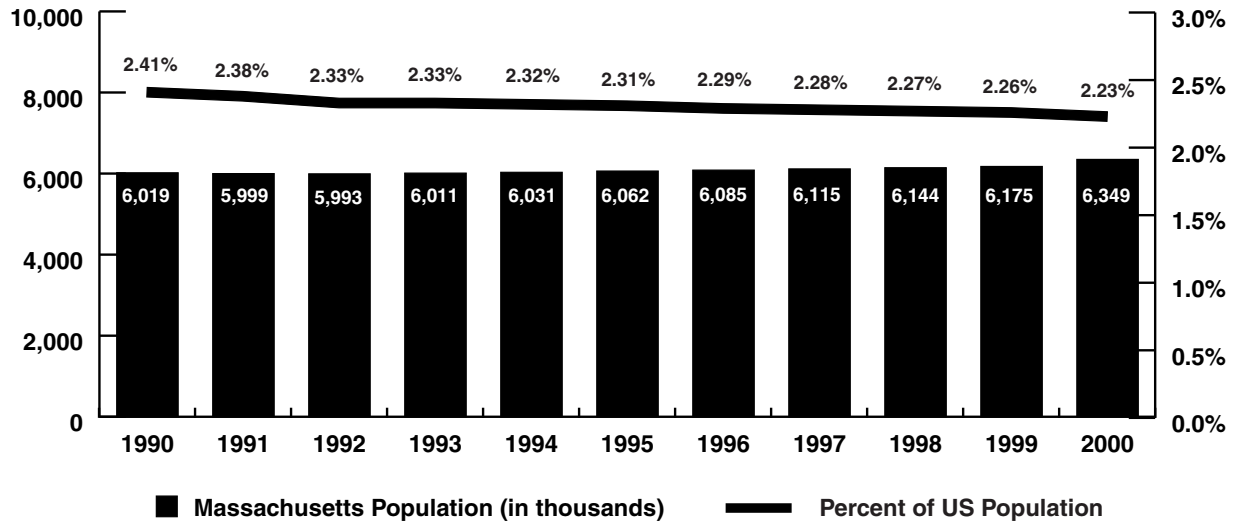


Sources: National Institute of Health; 1990-1993 NIH funding data are estimated based on "NIH support to the Top 100 Cities," US Bureau of Census
 Note: These numbers have not been adjusted for inflation.

Figure 1.5

- In 2000, Massachusetts trailed only California in the total dollar amount of medical research funding received from NIH (not shown).
- Massachusetts ranks first, however, when this funding is measured per capita. Per capita funding was far above the national average in 2000—\$242 in Massachusetts versus \$52 in the US overall.
- Per capita NIH funding for Massachusetts increased substantially—105%, from \$118 in 1990 to \$242 in 2000—compared to a 86% increase for the nation overall in the same period.

Massachusetts Population and Percent of US Population (1990-2000)

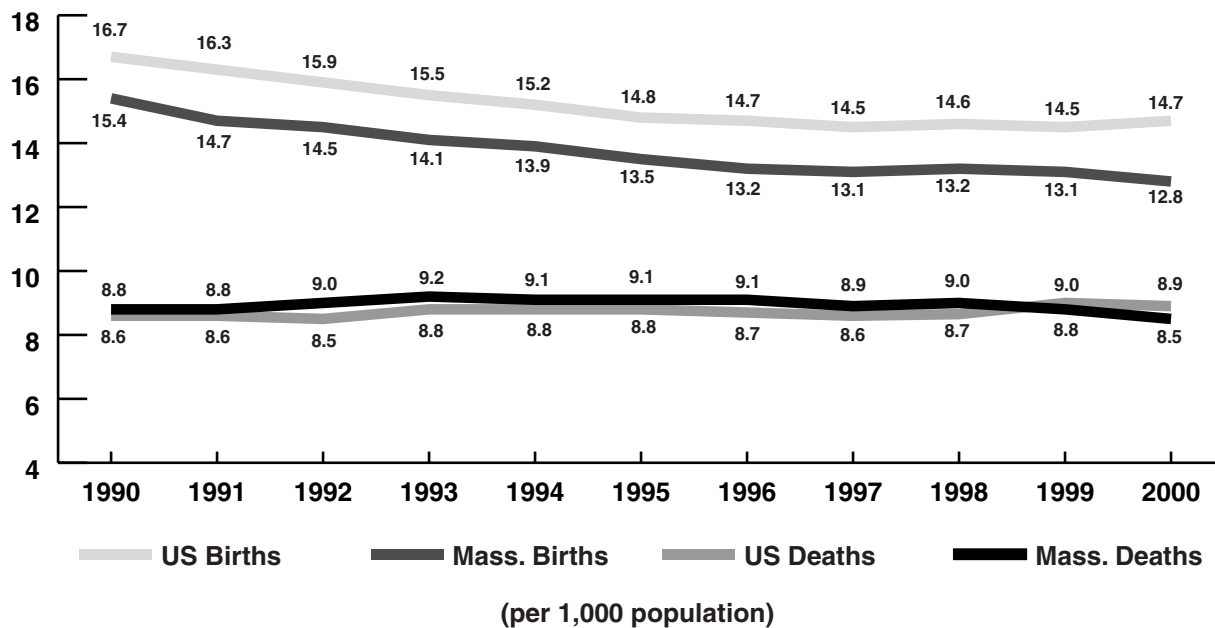


Source: US Bureau of Census

Figure 1.6

- Massachusetts experienced a population growth of 5.5% in the 1990s. Since this growth rate was smaller than the national average, the proportion of the Massachusetts population relative to total US population diminished over the decade.
- Massachusetts has almost exactly 1/50 of the United States population.

Births and Deaths per 1,000 Population in the US and Massachusetts (1990-2000)

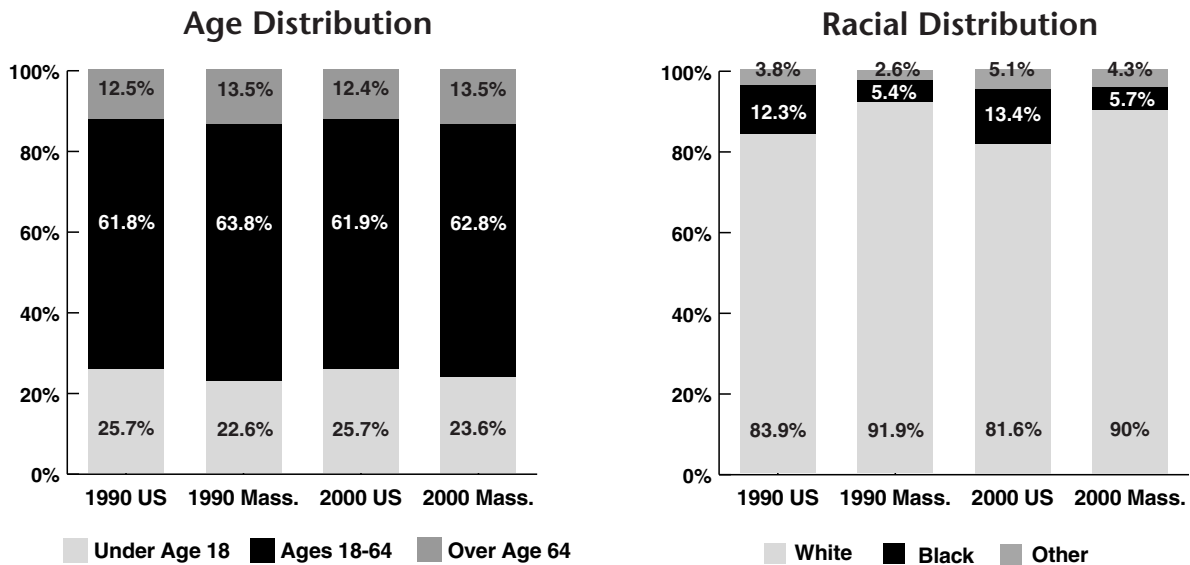


Sources: *Health, United States* (various years), US Department of Health and Human Services; *Advance Data Births* and *Advance Data Deaths*, Massachusetts Department of Public Health; "State Population Estimates: Annual Time Series, July 1, 1990 to July 1, 1999," US Bureau of Census, www.census.gov/population/estimates/state/st-99-3.txt

Figure 1.7

- Massachusetts has had a consistently lower birth rate than the rest of the country, and until 1999, a higher death rate.

Population Distribution by Age and Race in the US and Massachusetts (1990-2000)



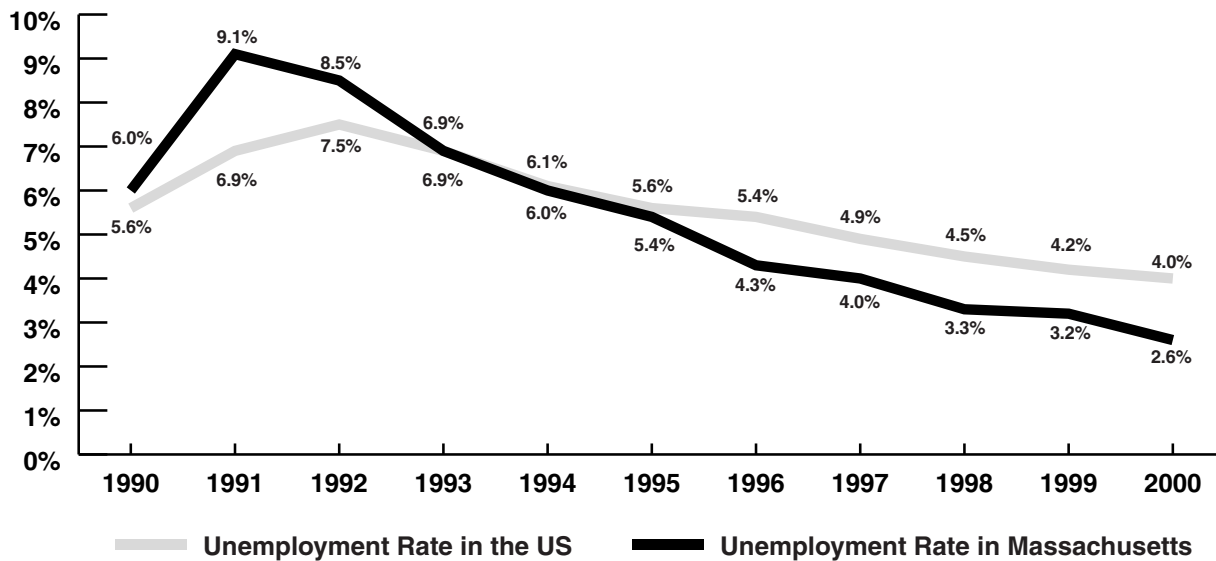
Source: US Bureau of Census

Notes: The US Census reclassified categories of ethnicity in 2000, which rendered 1990 and 2000 data uncomparable. The Hispanic category, included in 1990, was eliminated in 2000 and divided between white and black categories, depending on race.

Figure 1.8

- The age distribution of the Massachusetts population was fairly stable over the last decade. The under-age-18 group comprised a smaller share of the state population than the national average in both 1990 and 2000.
- Massachusetts had a significantly larger proportion of whites than the nation overall. The minority population in all categories increased slightly in Massachusetts.

Unemployment Rate in the US and Massachusetts (1990-2000)

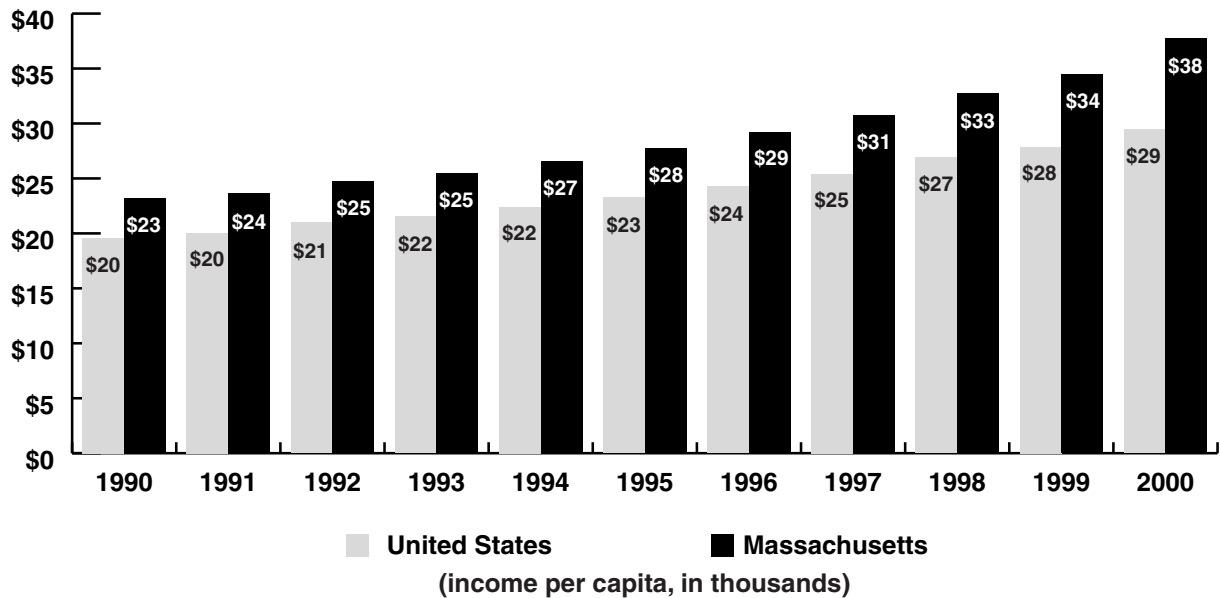


Source: US Department of Labor, Bureau of Labor Statistics

Figure 1.9

- The unemployment rate in Massachusetts declined consistently from 9.1% in 1991 to 2.6% in 2000. Although Massachusetts began the decade with an unemployment rate higher than the national average, by the end of the decade the Massachusetts unemployment rate was 1.4 percentage points lower.

Personal Income per Capita in the US and Massachusetts (1990-2000)



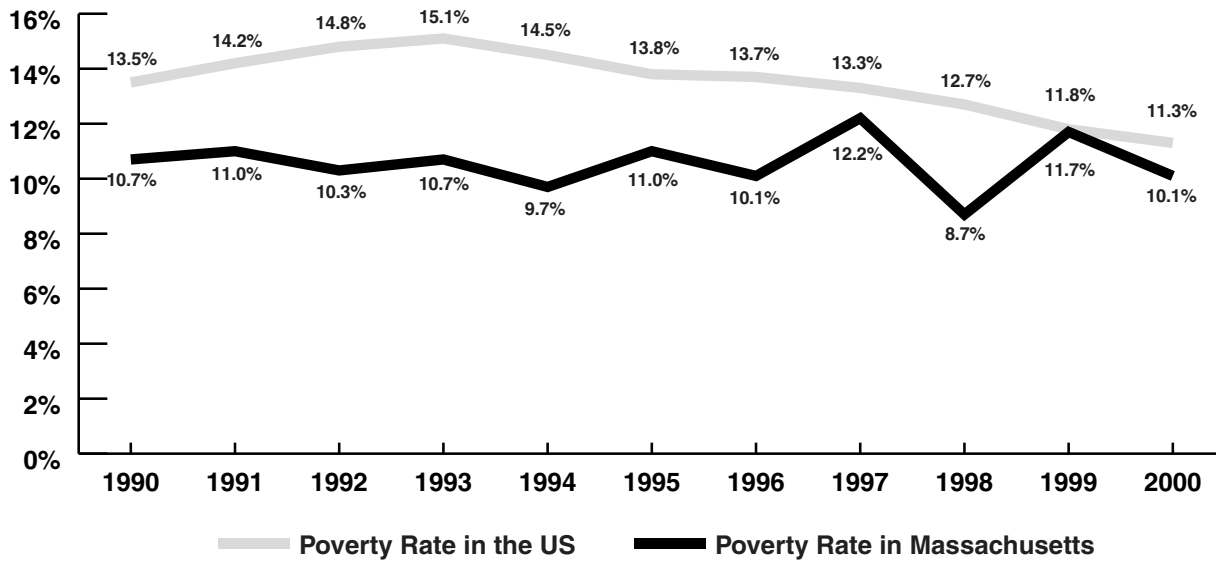
Source: US Department of Commerce, Bureau of Economic Analysis

Note: These numbers have not been adjusted for inflation.

Figure 1.10

- During the 1990s, per capita personal income in Massachusetts rose gradually, resulting in a 65% increase. This rate of increase was higher than the national trend, which saw a 45% increase.

Poverty Rate in the US and Massachusetts (1990-2000)

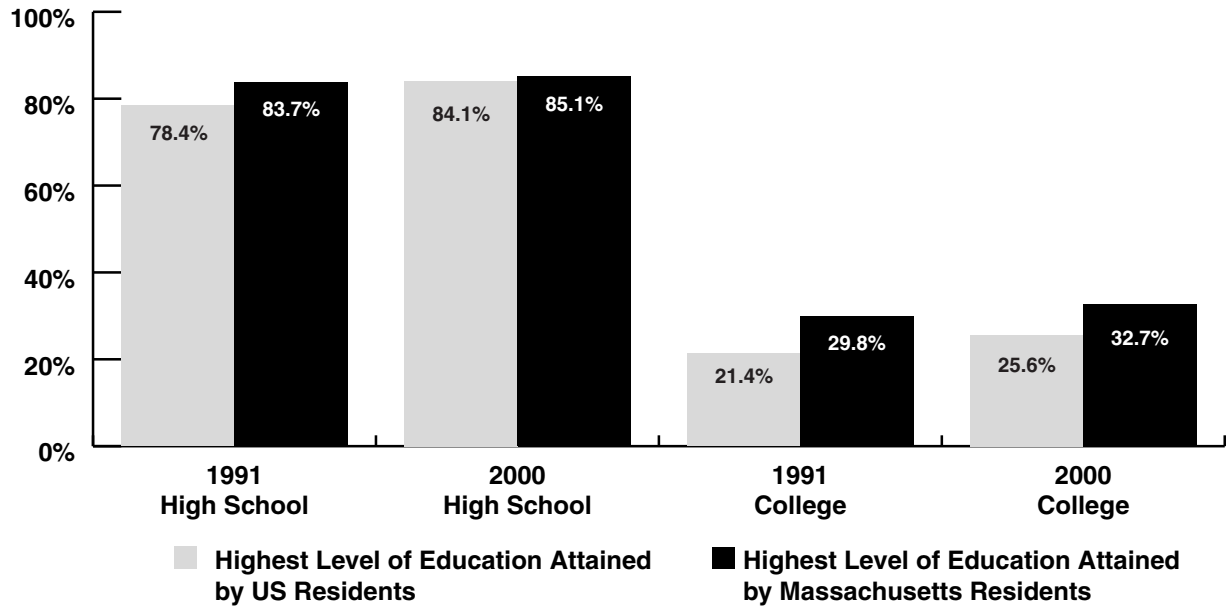


Source: US Bureau of Census

Figure 1.11

- Although the unemployment rate dropped substantially and personal income increased in Massachusetts over the 1990s, the state's poverty rate did not show a substantial decline until 1998 (from 12.2% in 1997 to 8.7% in 1998) before climbing substantially in 1999.
- Massachusetts had a lower poverty rate than the national average throughout the 1990s.
- While the US on average had an unbroken decline in its poverty rate since 1993, the Massachusetts poverty rate has fluctuated.

Highest Level of Education Attained by Persons Ages 25 and Over in the US and Massachusetts (1991 and 2000)



Source: US Bureau of Census

Figure 1.12

- In 1991 and 2000, the proportion of Massachusetts adults (ages 25 and over) who graduated from high school or college was higher than the national average.

Endnotes for Chapter 1: Setting the Stage

1. The specific health care expenditure measure used in this report is defined as personal health care expenditures (PHCE) in the State Health Expenditure Accounts (SHEA).³ This measure includes spending on therapeutic goods or services rendered to treat or prevent a specific disease or condition in a person, but leaves out some other spending categories, such as medical research and construction. The comprehensive total health care expenditure data at the state level are not currently available. All the monetary measures used in this report are not inflation adjusted.
2. The specific employment measure used in this report covers various health services fields in both private and public sectors, such as hospitals, physician offices, and long term care facilities. This measure has left out some health care related employment, such as health insurance industry, drug and medical instruments industries, and biomedical companies. It is difficult to clearly identify these employment areas under the current statistical system.
3. Levit, K. et al, *Health Care Financing Review*, "State Health Expenditure Accounts: Building Blocks for State Health Spending Analysis," Fall 1995.